

# PATENT ABSTRACTS OF JAPAN

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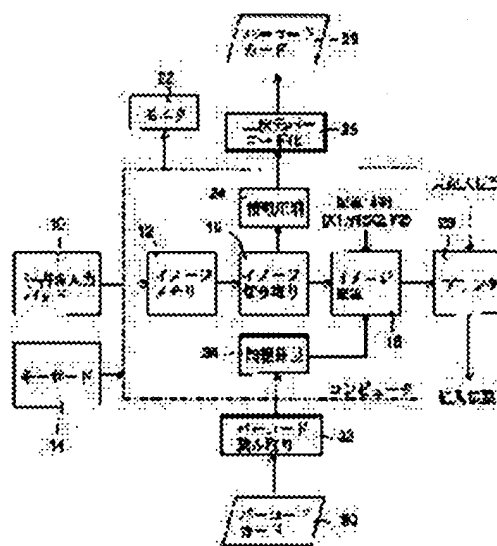
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## (54) HANDWRITTEN INFORMATION PROCESSOR AND INFORMATION STORAGE MEDIUM

(57)Abstract:

**PURPOSE:** To save the time and labor for handwriting the same contents on plural slips.

**CONSTITUTION:** An address and a name are handwritten on a handwriting input pad 10, the contents are fetched in an image memory 12 and an image cut-off circuit 16 cuts off the graphic data of a required part from the memory 12 and outputs them to an image arrangement circuit 18. The circuit 18 fits the output of the circuit 16 in a specified range and outputs it to a printer 20 and the printer 20 outputs the slip on which the handwritten contents are printed. An information compression circuit 24 information-compresses the output of the circuit 16 and a two-dimensional bar code making circuit 26 turns the output of the circuit 24 to a two-dimensional bar code and prints it on a paper card 28. A bar code read circuit 32 reads the two-dimensional bar code from a bar code card 30 and the output is expanded by an information expansion circuit 34, supplied to the arrangement circuit 18 and printed and outputted by the printer 20 similarly.



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**DESCRIPTION OF DRAWINGS**

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**[Brief Description of the Drawings]**

**[Drawing 1]** It is the outline configuration block Fig. of one example of this invention.

**[Drawing 2]** It is an example of the screen for an input of a pad 10.

**[Description of Notations]**

10: Handwriting input pad

12: Image memory

14: Keyboard

14a: Input cancellation key

14b: The completion key of an input

16: Image cutoff circuit

18: Image arrangement circuit

20: Printer

22: Monitor

24: Information-compression circuit

26: Two dimensions bar code-ized circuit

28: Paper medium (punched card)

30: Punched card

32: Bar code reader

34: Information expanding circuit

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**[Translation done.]**

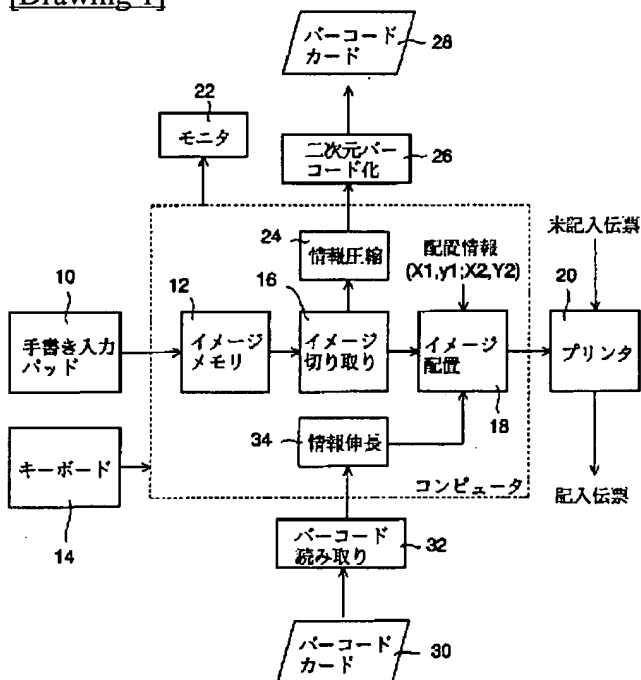
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## DRAWINGS

[Drawing 1]



[Drawing 2]

Diagram illustrating a form (Drawing 2) for user information input. The form is labeled with the number 10 and contains the following fields:

- 依頼主 住所 (Client Address)
- 氏名 (Name)
- 電話番号 (Phone Number)

Below the form are two buttons:

- 取消 (Cancel) - labeled 14a
- 完了 (Complete) - labeled 14b

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Industrial Application] More specifically, this invention relates to the information (it is a partner's same information to lists, such as his address, a name, etc.) written by various cut-forms by hand, the processor which can be copied simply, and the information storage medium which can be used there about a handwriting information processor and an information storage medium.

[0002]

[Description of the Prior Art] There are many applications as which the same address and name as each of two or more cut-forms must be filled in. It is a baggage delivery cut-form and, as for a direct example, only the number of the baggage which should be delivered, or parcels must write a client's address and name by hand. The same is said of the year-end present in a department store, and a delivery request of a midyear present.

[0003]

[Problem(s) to be Solved by the Invention] When there is a new client, first, the address and name etc. are coded, it registers with a computer, and there is already a computer managerial system printable only by assignment of identification code. However, such computer system requires huge time and effort for data control, and unless it will become very large-scale, effectiveness corresponding to costs cannot be acquired. A client also has the need (for example, a magnetic card or a plastics card is held) of memorizing self identification code.

[0004] On the other hand, if individual information will be superfluously registered into a computer and it sees from a client, although there is an advantage that handwritten time and effort is mitigated, a possibility of receiving a bad impression in respect of privacy maintenance is strong.

[0005] This invention aims at showing without the trouble of computer management easily the processor which can carry out copy processing of the handwriting input, and the information storage medium which uses it there.

[0006]

[Means for Solving the Problem] I have you write by hand once with a handwriting input means in this invention. The contents of handwriting are memorized for a memory means, and it processes to printing (for example, cutting off a need part the appointed place arrangement), and outputs to a printer.

[0007] Moreover, the part of the contents memorized for the memory means required henceforth [ next time ] at least is memorized to an information storage medium. 2nd henceforth, the contents memorized by this information storage medium are read, and it outputs to a printer.

[0008]

[Function] With the above-mentioned means, handwriting can be omitted now with outputting only the count of the need to a printer. Moreover, 2nd henceforth, handwriting can be completely omitted now by using an information storage medium.

[0009]

[Example] Hereafter, the example of this invention is explained to a detail with reference to a drawing.

[0010] Drawing 1 is the outline configuration block Fig. of one example of this invention, and applies the case where his address and name are copied in a baggage delivery cut-form.

[0011] First, while having the new request Lord fill in the address, a name, and the telephone number and printing those entry information in the delivery cut-form of the number of requests, actuation until it records on a card medium (a punched card or IC card) for next use is explained.

[0012] The handwriting input pad 10 piles up the transparence digitizer which senses the writing pressure more than predetermined on a liquid crystal display panel, and it transmits the handwritten contents to the image memory 12, displaying the image for an input beforehand set to the image memory 12 by the liquid crystal display panel. The image memory 12 memorizes the freehand drawing form data from a pad 10, and the image data for an input displayed by the liquid crystal display panel to another plane for processing in the back. In addition, the freehand drawing form data memorized by the image memory 12 are saved as it is until there are predetermined clear directions.

[0013] Drawing 2 shows an example of the screen for an input of a pad 10. The screen for an input displays the column which fills in delivery's address, name, and the telephone number of the request Lord. To the pad 10 down side, input cancellation key 14a and completion key of input 14b are arranged as some keyboards 14. Of course, it is clear that the same means as input cancellation key 14a and completion key of input 14b may be established in the screen for an input.

[0014] The image cutoff circuit 16 reads the freehand drawing form data memorized by the image memory 12, starts the image of the part printed in a cut-form, and outputs it to the image arrangement circuit 18. The coordinate data (X1, Y1;X2, Y2) which arranges a freehand drawing form elsewhere on the cut-form which carries out a printout is inputted into the image arrangement circuit 18.

[0015] Baggage delivery is because cut-form form changes with delivery contractors and the locations as which the request Lord's address etc. is filled in generally differ. When the delivery cut-form which carries out \*\*\*\* use beforehand is switched, an operator displays the delivery cut-form which can respond on a monitor 22, and specifies the delivery cut-form used with a keyboard 14. The coordinate data (X1, Y1;X2, Y2) of the range as which the request Lord's address etc. should be filled in is beforehand memorized for every delivery cut-form which can respond by the stores (hard disk drive unit etc.) which are not illustrated, the coordinate data (X1, Y1;X2, Y2) according to the specified delivery cut-form is impressed to the image arrangement circuit 18, and, as for the image arrangement circuit 18, this coordinate information is saved inside.

[0016] The image arrangement circuit 18 is arranged so that the freehand drawing form data from the image logging circuit 16 may enter into the appointed range by coordinate data (X1, Y1;X2, Y2), and it is outputted to a printer 20. When freehand drawing form data go into assignment within the limits and do not go out, you may reduce in advance so that it may go into assignment within the limits. When not going into assignment within the limits only in an one direction in every direction in that case, it is desirable to reduce to actual size in every direction.

[0017] A printer 20 prints and outputs the freehand drawing form data from the image arrangement circuit 18 to a delivery cut-form. The number of sheets to print is specified from a keyboard 14. By this example, assignment number of sheets and also after printing, since stored data is saved unless there are directions which clear the freehand drawing form data to memorize or the following freehand drawing form data are inputted, again, the image memory 12 specifies printing number of sheets and should just start printing to carry out additional printing.

[0018] When a client demands the bar code card or IC card which saved the contents of entry, the image cutoff circuit 16 supplies the cut-off freehand drawing form data to the information-compression circuit 24. The information-compression circuit 24 carries out the information compression of the data from a circuit 16, and supplies compressed data to the two dimensions bar code-ized circuit 26. The two dimensions bar code-ized circuit 26 two-dimensions-bar-code-izes compressed data, and prints and outputs it to the predetermined paper medium (punched card) 28. Since a two dimensions bar code is printable in usual pasteboard, it is very less expensive than expected, and the request Lord can be provided with it for free. Since there are some which the Olympus symbol company proposes as a two dimensions bar code, for example and the storage capacity which is about 2 K bytes is provided, it is

enough for the application of this example.

[0019] About the request Lord possessing the punched card 30 already recorded by the two dimensions bar code by considering the address etc. as an image, the punched card 30 is set to a bar code reader 32, and a two dimensions bar code is read. Since the contents of decode of a two dimensions bar code are what carried out the information compression of the freehand drawing form, it elongates by the information expanding circuit 34, and they restore freehand drawing form data. The freehand drawing form data restored by the information expanding circuit 34 are supplied to the image arrangement circuit 18. The same with having explained previously, the image arrangement circuit 18 inserts the image of the freehand drawing form from a circuit 34 in the appointed range (X1, Y1;X2, Y2), and supplies it to a printer 20. A printer 20 carries out the printout of the freehand drawing form to a predetermined form.

[0020] Although the data which carried out the information compression of the freehand drawing form data were recorded on the paper medium etc. by the two dimensions bar code in the above-mentioned example, if the amount of data of freehand drawing form data balances the amount of information of a two dimensions bar code, the need of carrying out an information compression especially will not have it. If an information compression is not carried out, the information-compression circuit 24 and the information expanding circuit 34 become unnecessary.

[0021] In addition, the part of circuits 12, 16, 18, 24, and 34 realizable [ with hardware ] partially or on the whole, of course is clear although software realizes on the personal computer.

[0022] An IC card may be used besides a two dimensions bar code. Since an IC card is generally large capacity, it has the advantage that a majority of other information, such as a receiver's address, is made to memorize, and it can set. However, the IC card is still expensive and has the fault which will force a cost price burden upon a user. There may be a merit in a large-lot user etc. depending on the diffusion rate of an IC card.

[0023] Moreover, although the above-mentioned example explained the example printed in a delivery cut-form by using a handwriting alphabetic character etc. as a graphic form, it prints on an adhesion label and you may make it stick the adhesion label on the predetermined part of a cut-form. The adhesion label is very useful to stick the handwriting memorandum of the same contents etc. on two or more parts. It is also clear that there is no need of forming the contents of handwriting into the bar code card for such an application.

[0024] In this example, since he itself will manage the request Lord's individual information, individual humanity news is not registered into a computer. Risk of this of meaning that there is little computer investment and it ends for a small-scale company, and privacy being invaded also for request main [ itself ] decreases, and it has sense of security.

[0025] Moreover, although the handwriting input pad 10 was used for the freehand drawing form input in this example, what gave the function which carries out the data input of the locus to the writing pen is marketed. If this pen is used, in case I will have the request Lord fill in one delivery cut-form, it becomes possible to incorporate those contents of entry as locus data or graphic data, and the same operation effectiveness as the case where the handwriting input pad 10 is used can be acquired.

[0026]

[Effect of the Invention] The printout of the address etc. can be carried out to many forms, without repeating handwriting according to this invention so that he can understand easily from the above explanation. moreover, it is necessary to newly cease to write by hand, and by memorizing to the information storage medium by considering freehand drawing form information as an image, convenience is markedly alike and, 2nd henceforth, improves.

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**CLAIMS**

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**[Claim(s)]**

[Claim 1] A handwriting input means and a memory means to memorize the contents of handwriting inputted by the handwriting input means concerned, It is the handwriting information processor characterized by consisting of a processing means to read the contents data of handwriting memorized by the memory means concerned, and to process to printing. The handwriting information processor characterized by providing a cutoff means by which the processing means concerned cuts out a predetermined part from the contents data of handwriting memorized by the memory means concerned, and an arrangement means to arrange the contents data of handwriting cut off by the cutoff means concerned in the specified location.

[Claim 2] Furthermore, the handwriting information processor possessing the information write-in means which writes the part of the contents of handwriting memorized by the memory means concerned which includes the appointed range at least in the information storage of another object according to claim 1.

[Claim 3] The handwriting information processor according to claim 2 with which the above-mentioned information write-in means consists of an information-compression means which carries out the information compression of the part of the contents of handwriting memorized by the memory means concerned which includes the appointed range at least, and a coding means which encodes the output of the information-compression means concerned in a predetermined code, and is written in the above-mentioned information storage medium.

[Claim 4] Furthermore, a handwriting information processor given in claim 1 which possesses the printer which prints the output of the above-mentioned processing means, reads the freehand drawing form information memorized by the information storage, and supplies and carries out the count printout of assignment to the printer concerned thru/or any 1 term of 3.

[Claim 5] The handwriting information processor characterized by consisting of a handwriting input means, a memory means to memorize the contents of handwriting inputted by the handwriting input means concerned, and an information write-in means that writes the part of the contents of handwriting memorized by the memory means concerned which includes the appointed range at least in the information storage medium which can be removed freely.

[Claim 6] The handwriting information processor according to claim 5 with which the above-mentioned information write-in means consists of an information-compression means which carries out the information compression of the part of the contents of handwriting memorized by the memory means concerned which includes the appointed range at least, and a coding means which encodes the output of the information-compression means concerned in a graphic form code, and is written in the above-mentioned information storage medium.

[Claim 7] The information storage medium characterized by holding the code information which shows the graphic form of the hand written by hand.

[Claim 8] The above-mentioned code information is an information storage medium according to claim 7 by which the information compression is carried out.



[Claim 9] The information storage medium according to claim 7 or 8 which it is in any of a sheet-like medium and a card-like medium.

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